

# ChemMax® 4

Powered by PermaSURE®



Superior multi-layer barrier films laminated to spunbond PP substrate - 190gsm.

- Extruded fabric construction. Results in smoother and more consistent fabric than bonded or glued competitors.
- Superior softness and flexibility and more consistent chemical barrier (no 'pinching' or thinner bond points as seen in competitor fabrics).
- European manufactured fabric. Tested against a full range of chemical warfare agents for anti-terror and civil defence operations.
- Very soft and flexible materials for enhanced comfort.
- Cushioned double-layer knee pads for increased comfort and safety.
- Improved Super-B style coverall: superior fit, wearability and durability.
- Three-piece hood, inset sleeves and diamond crotch gusset results in best fitting garment on the market.
- New design three-piece hood with tapered centre piece for superior face and respirator mask fit.
- New higher neck and zip flaps for improved face/neck protection.
- Double zip & storm flap front fastening for safe and secure protection.

### Physical Properties

		Brand C	Brand D	ChemMax® 4	Brand E	Brand F
Property	EN Std	CE Class	CE Class	CE Class	CE Class	CE Class
Abrasion Resistance	EN 530	6	6	6	6	6
Flex Cracking	ISO 7854	1	5	2	1	1
Trapezoidal Tear	ISO 9073	2	3	6	5	3
Tensile Strength	EN 13934	3	2	4	4	4
Puncture Resistance	EN 863	2	2	2	2	2
Burst Strength	ISO 2960	NA	2	4	NA	NA
Seam Strength	ISO 5082	4	4	TBA	5	5

### Permeation Test Data \*

Liquid chemicals from EN 6529 Annex A. For a full list of chemicals tested see Permeation Data Tables or Chemical Search at [www.lakeland.com/europe](http://www.lakeland.com/europe). Tested at saturation unless stated.

		Brand C	Brand D	ChemMax® 4	Brand E	Brand F
Chemical	CAS No.	CE Class	CE Class	CE Class	CE Class	CE Class
Acetone	67-64-1	6	6	6	6	6
Acetonitrile	70-05-8	6	6	6	6	6
Carbon Disulphide	75-15-0	6	Imm	6	6	6
Dichloromethane	75-09-2	Imm	Imm	6	6	6
Diethylamine	209-89-7	6	Imm	6	6	6
Ethyl Acetate	141-78-6	6	6	6	6	6
n-Hexane	110-54-3	6	6	6	6	6
Methanol	67-56-1	6	6	6	6	6
Sodium Hydroxide (30%)	1310-73-2	NA	6	6	6	6
Sulphuric Acid (96%)	7664-93-9	6	6	6	6	6
Tetrahydrofuran	109-99-9	6	6	6	6	6
Toluene	95-47-6	6	6	6	6	6
Chemical-gas						
Ammonia 99%	7664-41-7	6	6	6	6	6
Chlorine 99.5%	7782-50-5	6	6	6	6	6
Hydrogen Chloride (99%)	7647-01-0	6	6	6	6	6

\* NB = normalised breakthrough. This is the time taken for the PERMEATION RATE to reach 1.0µg/minute/cm² in controlled laboratory conditions at 23°C. It is NOT the point at which breakthrough first occurs. For safe use times see Selection Guide and PermaSURE®.

Areas shaded green indicate where ChemMax® 4 is either equal to or better than the equivalent brand C, D, E and F products.

### ChemMax® 4 Styles



**Style code 428**  
Coverall with hood, cuffs, waist & ankles. Double front zip fastening, cushioned kneepads

Sizes: S - XXXL



**Style code L428**  
Coverall with elasticated hood, cuffs, waist & ankles. Double front zip fastening, cushioned kneepads, thumb loops.

Sizes: S - XXXL



**Style code 430**  
Coverall "Plus" version with attached feet/boot flap and double cuffs.

Sizes: S - XXXL



**Style code 430G**  
Coverall with hood and attached feet. Double zip/storm flap, double cuff with attached gloves using Push-Lock® connection system.

Sizes: S - XXXL



**Style code 527**  
Smock / Gown with rear entry / ties and elasticated cuffs

Size: M - XL



**Style code 025**  
Apron with ties

Size: M - XL



**Style code 024**  
Sleeves

Size: One size



**Style code 023NS**  
Overboots with anti-slip sole

Size: L - XL



**Style code 021**  
Cape hood with rear inlet pigtail

Size: One size

Available in: Military Green ■ Yellow ■

Not all styles are available from European stock in this fabric. Please contact our sales office for information on stock items.

## Super-B Style New and Improved Design Features

### 1. Three-Piece Hood

The three-piece hood results in a 3D shape which is more rounded and fits the head better, moving freely with wearer movement and resulting in a more comfortable and durable garment.

ChemMax® now features a unique tapered centre piece resulting in an even better fitting hood.

### 2. Inset Sleeves

Inset sleeves result in greater freedom of movement and less stress on seams - especially at the crotch.

In addition there is less pulling back of sleeves during use, so ChemMax® garments need no thumb loops - which can catch on machinery and be a hazard.

### 3. Diamond Crotch Gusset

The crotch features a diamond shaped 2-piece gusset which creates a better fitting shape allowing greater freedom of movement and takes stress away from the critical crotch area.

### 4. Cushioned Knee-pads

ChemMax® 1, 2, and 3 features large padded knee-pads. A double fabric layer with cushioning material between means increased comfort and safety when kneeling on rough surfaces.

### 5. Updated neck and zip design!

Higher neck, zip and zip-flap. Better protection at the neck.

### 6. Chest Label

Lakeland chest labels feature all CE labelling requirements. So users and manager's can easily see wearers have the correctly certified garment.

### 7. Double Zip and Storm Flap

Lakeland's multi-layer double-zip and flap results in more secure protection at the front fastening - the most critical area of the garment.

### 8. Push-Fit Glove Option

Combine ChemMax® with Lakeland's unique Push- Lock® Glove Connection System. Leak-proof, Type 3 approved glove connection for ChemMax® Coveralls.

The combination of features in the Lakeland Super-B style results in an even better fitting, more comfortable, more durable garment with better protection than ever!

## Chemical Suit Selection

Selection of an appropriate chemical suit is vital in ensuring and optimising protection, comfort and cost.

### 1. The chemical?

The primary consideration is the chemical. What does a permeation test 'breakthrough' mean? How toxic is it and how much will cause harm? How to calculate safe-use times.

### 2. The task/hazard type?

What type of spray hazard does the application present? Determining which applies, can have important consequences for garment options.

### 3. Physical/environmental factors?

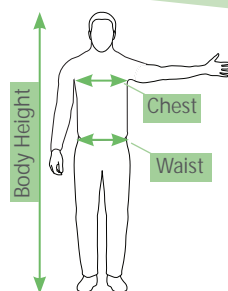
What physical and environmental factors might be important in the application?

Request your copy of 'The Guide to Chemical Suit Selection' from [nastevenson@lakeland.com](mailto:nastevenson@lakeland.com)

## Seams

All ChemMax® and TomTex® coveralls feature stitched and taped seams for maximum strength and protection.

## Garment Sizing



Lakeland garments are cut and sized generously and according to the Super-B style for maximum freedom.

Size	Body Height (cm)	Chest (cm)	Waist (cm)
S	164-170	84-92	82-88
M	170-176	92-100	88-94
L	176-182	100-108	94-100
XL	182-188	108-116	100-106
XXL	189-194	116-124	106-112
XXXL	194-200	124-132	112-114

Selection of the appropriate sized garment is important in maximising comfort, protection and durability.

### Storage



Lakeland coveralls are supplied individually (unless specified) in sealed, vacuum packed in polythene bags and outer cardboard cartons.

As materials are unaffected by normal conditions garments can be stored in standard warehousing facilities. In general keep dry and avoid very warm temperatures or temperatures below -15°C.

Avoid direct sunlight or other strong light for extended periods.

### Shelf-Life



With bags un-opened, properly stored in cool, dry conditions and away from sunlight or strong light, garments should achieve a shelf life of ten years or more. Some discolouration may occur over time, especially in garments left in sunlight and in particular white fabric may gain a slight yellow tinge, but this does not affect garment performance.

For suits designed to protect against hazardous chemicals we would recommend that after a maximum of 10 years, suits are downgraded to "training suits" or disposed of suitably.

Before use, all garments, regardless of age, should always be given a visual inspection for any damages or tears and to ensure any parts such as zips etc. function properly. Any garments that are damaged or worn in any way should not be used in any hazardous situation.



### Disposal

Uncontaminated garments can be disposed of via any standard method and according to local regulations. They be included with standard refuse into landfill or can be incinerated without any hazardous emissions - subject to local legal requirements.

However, garments contaminated with any chemicals must be disposed of appropriately with particular reference to the disposal requirements of the chemical and any local or national regulations. It is the users' responsibility to ensure contaminated garments are disposed of appropriately accordingly. Special instructions are available on request for Interceptor®.

\* Competitor brand results are from competitors own websites and were correct at the time of publication. Users are recommended to check up to date information with competitors before making any assessment based on specific chemicals. Other chemical test results may be available from competitors.